INDEX

	Page
Abrasion Testing Set	101
Adhesion Strength of Electrolytic Deposits	116
Aluminium in Shipbuilding	274
Analysis of Welding Transformer Characteristics	79
Apparatus for Continuous Measurement of the Calorific Value of Fluids	383
*Apparatus for Detecting Surface Cracks in Wires	335
Apparatus for Tensile Testing at Sub-Zero Temperatures	199
*Appliance for Testing Piston Rings	370
Application of Electronics to the Iron and Steel Industry	417
*Application of Gas Turbines to Mobile Power Stations, and Rail and Ship Propulsion	405
Application of Hydraulic Calculations to the Design of Pouring Gates for Castings	47
Approximate Calculation of the Noise Produced by Squirrel-Cage Motors	222
Armour Coal, a German Attempt to Utilize Powdered Coal as Material for the Production of Sintered Compacts	80
*Artificial Cooling in the Laboratory and in Industry	443
Assembling Metal Parts by Shrink Fitting	363
Assessment of the Resistance of Refractory Materials to Sudden Temperature Variations	189
Atomization of Liquids by Centrifugal Nozzles	72
Axial Fan with Variable-Pitch Blading	5
"Bandurko" Type Screw-Cutting Head for Pipes	61
Bar Extension Tubes for Capstan Lathes and Automatics	63
Barrel Burnishing of Light Alloy Products	172, 203
Baths for Copper Plating	311
Belt Drives	205
Boundary Flow in the Diffuser of a High-Pressure Boiler Feed Pump	118
Breakdown Oscillograms of Oil Impregnated Paper	112
British Industries Fair, 1949	135, 177
*Calculation of Boiler Feed Water Heating	175
Calculation of Rockets	36
Calculation of the Function of Acoustic Sensation	346
Camshaft Precisionaire	101
*Carbon-Graphite Parts	215
*Ceramic Materials with a High Dielectric Constant	251
*Coating Steel with Nickel by Immersion in Nickel Chloride Solutions	67
Compounding of Small Alternators	20
Conical Boring Head	25
*Constant Power Transmission Over Long Distances	215
Control of Carbon Content During Heat Treatment of Steel in Atmosphere Furnaces	57
*Corrosive Attack of Motor Fuels	103
*Cost and Profit Calculation at Steel Works	31
Couplings for Built-Up Crankshafts and their Behaviour Under Load	133
*Cycle Annealing in Quality Steel Production	31
*Deposition of Metals on Aluminium by Immersion from Solutions containing Fluorides	333
Design for Sales	367
Design Trends and the Style of Machine Tools: Lathes—Parts I, II, III	242, 285, 328
Design Trends and the Style of Machine Tools: Milling and Grinding Machines—Part I	394
Detection of Inter-Turn Faults During Impulse Tests of Transformers	384
*Development of Cleavage Fractures in Mild Steel	103
Development of the Gas Shielded Metal Arc Welding Process	59
Diesel-Electro-Mechanical Drive for Traction Purposes	430
Die-Setting and Economical Punch Press Operation	21
Direct Reading Dial	65
*Direct-Reading Dynamic Electrometer	251
Drilling Bush Attached to Portable Drills	100
Drum-Making Machinery	214
"Dry" Plating Process	132
Dynamic Capacity of Rolling Bearings	15, 123
Economy of Alcohol in the Production of Insulating Materials	115
Effects of High Temperatures of Short Duration on Paper and Cotton Insulation	388
*Effect of Niobium on the Fatigue Strength of Chrome-Molybdenum Steel at a Temperature of 550° C	252
Effect of Premagnetisation on the Complex Permeability of Coil Cores	376
Effects of Sulphur Content and Dewpoint of Flue Gases Upon Boiler Operation	192
*Electrically Conductive Glass is Useful for Heating Applications	370
Electrical Measurement of Acceleration	167
Electro-Fragmentation Process	306
Electrolytic Polishing and Short-Circuit Etching of Copper and Cuprous Alloys	381
Electrolytic Tool Sharpening	95
Electroplating Recessed Areas with Dipolar Electrodes	26
*Electropolishing Brass	371
Engineering and Marine Exhibition	289

INDEX

	Page
Abrasion Testing Set	101
Adhesion Strength of Electrolytic Deposits	116
Aluminium in Shipbuilding	274
Analysis of Welding Transformer Characteristics	79
Apparatus for Continuous Measurement of the Calorific Value of Fluids	383
*Apparatus for Detecting Surface Cracks in Wires	335
Apparatus for Tensile Testing at Sub-Zero Temperatures	199
*Appliance for Testing Piston Rings	370
Application of Electronics to the Iron and Steel Industry	417
*Application of Gas Turbines to Mobile Power Stations, and Rail and Ship Propulsion	405
Application of Hydraulic Calculations to the Design of Pouring Gates for Castings	47
Approximate Calculation of the Noise Produced by Squirrel-Cage Motors	222
Armour Coal, a German Attempt to Utilize Powdered Coal as Material for the Production of Sintered Compacts	80
*Artificial Cooling in the Laboratory and in Industry	443
Assembling Metal Parts by Shrink Fitting	363
Assessment of the Resistance of Refractory Materials to Sudden Temperature Variations	189
Atomization of Liquids by Centrifugal Nozzles	72
Axial Fan with Variable-Pitch Blading	5
"Bandurko" Type Screw-Cutting Head for Pipes	61
Bar Extension Tubes for Capstan Lathes and Automatics	63
Barrel Burnishing of Light Alloy Products	172, 203
Baths for Copper Plating	311
Belt Drives	205
Boundary Flow in the Diffuser of a High-Pressure Boiler Feed Pump	118
Breakdown Oscillograms of Oil Impregnated Paper	112
British Industries Fair, 1949	135, 177
*Calculation of Boiler Feed Water Heating	175
Calculation of Rockets	36
Calculation of the Function of Acoustic Sensation	346
Camshaft Precisionaire	101
*Carbon-Graphite Parts	215
*Ceramic Materials with a High Dielectric Constant	251
*Coating Steel with Nickel by Immersion in Nickel Chloride Solutions	67
Compounding of Small Alternators	20
Conical Boring Head	25
*Constant Power Transmission Over Long Distances	215
Control of Carbon Content During Heat Treatment of Steel in Atmosphere Furnaces	57
*Corrosive Attack of Motor Fuels	103
*Cost and Profit Calculation at Steel Works	31
Couplings for Built-Up Crankshafts and their Behaviour Under Load	133
*Cycle Annealing in Quality Steel Production	31
*Deposition of Metals on Aluminium by Immersion from Solutions containing Fluorides	333
Design for Sales	367
Design Trends and the Style of Machine Tools: Lathes—Parts I, II, III	242, 285, 328
Design Trends and the Style of Machine Tools: Milling and Grinding Machines—Part I	394
Detection of Inter-Turn Faults During Impulse Tests of Transformers	384
*Development of Cleavage Fractures in Mild Steel	103
Development of the Gas Shielded Metal Arc Welding Process	59
Diesel-Electro-Mechanical Drive for Traction Purposes	430
Die-Setting and Economical Punch Press Operation	21
Direct Reading Dial	65
*Direct-Reading Dynamic Electrometer	251
Drilling Bush Attached to Portable Drills	100
Drum-Making Machinery	214
"Dry" Plating Process	132
Dynamic Capacity of Rolling Bearings	15, 123
Economy of Alcohol in the Production of Insulating Materials	115
Effects of High Temperatures of Short Duration on Paper and Cotton Insulation	388
*Effect of Niobium on the Fatigue Strength of Chrome-Molybdenum Steel at a Temperature of 550° C	252
Effect of Premagnetisation on the Complex Permeability of Coil Cores	376
Effects of Sulphur Content and Dewpoint of Flue Gases Upon Boiler Operation	192
*Electrically Conductive Glass is Useful for Heating Applications	370
Electrical Measurement of Acceleration	167
Electro-Fragmentation Process	306
Electrolytic Polishing and Short-Circuit Etching of Copper and Cuprous Alloys	381
Electrolytic Tool Sharpening	95
Electroplating Recessed Areas with Dipolar Electrodes	26
*Electropolishing Brass	371
Engineering and Marine Exhibition	289

Engin. Lib.
Soth

INDEX

Page

Fatigue Tests of Spot Welds: Improvement of their Endurance Limit by Hydrostatic Pressure 76, 120
Fitting of Rotors on Shafts of Electrical Machines 371
Flow Conditions and Heat Transfer in Tubular Air Preheaters 126
Flow Distribution in Forced-Circulation Boilers 85
Friction-Sawing Facts and Figures 23
Functional Design 210
*Function of the Coating of Welding Rods .. 32
Fundamentals of Automatic Control 184, 237, 317

Gas Turbine as a Means of Fuel Saving and Increase of Output in Steam Power Stations 158
Gearing 93
Gearless Drive for Tractors 53
*General Aspects of E.H.V. System Earthing 31
Glass-Lined Chemical Storage Tank .. 211
Graphical Determination of Critical Speeds of Multi-Mass Systems 11
Grid-Controlled Switches for the Testing of Fuses with Alternating Currents 89

Hard Chromium-Plated Bearing Surfaces with Anti-Friction Qualities 99
*Highly Sensitive Differential Manometer .. 32
*High-Resolution Camera for Structural Analysis by Monochromatic X-Rays 67
*High-Speed Electro-Hydraulic Arc-Furnace Control 251
High Speed Trains—A Field for Gas Turbines 230
*High-Strength Ceramics for High-Temperature Use 405
High Vacuum Plant 212
*Holzer Method for Forced-Damped Torsional Vibrations 335
Hot-Worked Cast Iron 348
Hydro-Sheave Drive 101

*Ice-Making by the Extrusion Process .. 68
*Identification of Carbon Steels by the Spark Test 67
Impeller Design for Centrifugal Pumps and Compressors 423
Inclination of Vertical Water Turbine Shafts on Compressible Foundations 74
Industrial Photocells 29
*Influence of Manganese Upon the Metallurgical Reactions in the Basic Open Hearth Process 334
Influence of Stress Concentration, Speed of Deformation, and Temperature on the Rupturing Strength of Steels 350, 412
Influence of the Boiling Characteristics of Petrol on the Liquid Film Deposited on the Walls of the Intake of a Combustion Engine 393
Installation and Maintenance of Pyrometers for the Heat Treatment Shop 433
Internal Resonance—One of the Principal Causes of Machining Vibrations 201

Page

Investigation of Cavitation Corrosion 314
*Investigation of Creep, Fracture, and Bending of Lead and Lead Alloys for Cable Sheathing 252
Investigation of the Stress-Strain Diagram at Low Temperatures 7

*Magnetic Fluid Clutch in Servo Applications 443
Manifold Valve 214
Mechanical Speed Converter 208
Mechanical Stoker with Bottom Ignition .. 415
*Melting and Casting Zirconium Metal 405
Merchant Ship Propulsion 258
*Method for Determining the Mercury Content of Air 443
Method of Testing Fatigue of Steel Samples at High Temperatures 46
Micro-Hardness Tester 29
Milling High-Strength Alloys at Elevated Temperatures 169
Miniature Adjustable Speed Drive 213
Miniature Thermionic Valve Handling Equipment 249
Modern Photo-Electric Controls 2
Multiple Spindle Drill Heads 129

Negative Spring—A Basic New Elastic Member 359
New Balancing Machines for the Dynamic Balancing of Rotors 161
New Centrifugal Compressor 110
*New Cold Mill at Weirton Increases Tin Plate Capacity 32
New Design for Steam Separation in High-Pressure Boilers 6
New Designs of Milling Cutters for High-Speed Machining 326
*New Direct-Reading and Recording Apparatus for Spectrographic Analysis 215
New Facts on the Straightening of Welded Aircraft Structures 165
New Flame Cutter 403
New Goods Locomotive 1-5-0 100
New Grid Casting Improves Battery Life .. 416
New Hydraulic Torque Amplifier 414
New Instrument for the Theoretical Determination of Stress Distributions in Flat Plates or Irregular Shape 233
New Lettering Instrument 30
*New Method for the Calculation of Commutation Losses of D.C. Machines 369
*New Overconsumption Watt-Hour Meter .. 333
New Production Methods for Transformer Sheets 325
New Tilting-Head Hydraulic Press 65
New Transatlantic Ships 92
*New Trend in the Design of Large Power Transformers 251
New Trimming Fixture for Deep-Drawn Parts 250

INDEX

	Page
New Trolley-Bus Types	117
*New Wire Fatigue Testing Method	32
Noise Problems in Industry	309
Nomogram for the Calculation of Condenser Bushings	197, 227
Novel Facing Tool for Radial Drills	174
*Observation of the Lubricating Oil Film Between Piston Ring and Cylinder of a Running Engine	334
*On the Fatigue Limits of Notched Specimens	176
Optical Recording Extensometer	345
Output Control of Piston Compressors	322
*Oxygen Efficiency in Anodic Oxidation of Aluminium	103
Pant-O-Scriber Blade Checker	65
Philips Electron Microscope	212
*Planning of Large-Scale Oxygen Production	103
Plastic "Electrets" are Nearing Industrial Application	321
*Plastics and their Application in the Electrical Industry	406
Plastics in Shipbuilding	281
Pneumatic Micrometer for Automatic Control	213
"Poke" Welding—A New Method of Joining Stainless Steel, Aluminium and Mild Steel	204
Portable Electric Saw	212
*Precision Casting with Frozen Mercury Patterns	333
*Presentation and Measurement of Surface Roughness with the Aid of Electron-Microscopes	176
Present Status of the Development of Hand-Fired Smokeless Coal Heaters	389
Problems of Turbine Standardisation	157
Problems of Welded Ship Design	267
*Production of Electrolytic Iron Powder	68
Progress in Separation Methods	50
*Progress in the Study of Surface Oxidation at Higher Temperatures	175
Project for a Railway Track Suitable for Increased Speeds	113
Properties of Conductive Plastics	441
Proportioning Pyrometer Controller	102
Proposal for Climb Requirements on a Rational Basis	42
Pump for Industrial Liquid Handling	30
Rapid-Reversing Drive for Planing Machines	360
Redesign of Existing "Dough Sheeting and Crossrolling" Machine from a Cast Iron Construction to a Welded Steel Construction	365
*Relation of Experiments to Mathematical Theories of Plasticity	334
Removal of Heavy Overhead Transmission Line Poles	10
*Report on Investigations of Thrust Bearings	369
Research into Boundary Lubrication	232
Residual Stresses in Rolled Sheet	41
Rheological Criteria for Two-Stroke Cycle Scavenge Systems	152, 193
Rubber in Shipbuilding	279
Running Count Recording Instrument	102
Self-Controlled Heating Element	205
Small Laboratory Arc Furnace	354
Smooth Regulation of Spot Welding Sets by Means of a Choke in their Secondary Circuit	91
Some Aspects of Cabinet Design and Production	435
Some Experiences with the Creep Behaviour of Materials	340
Some Notes on Product Design	209
*Some Precipitation-Hardening Silver Alloys	252
Sonic and Ultrasonic Dust and Smoke Precipitators	241
Special Electrodes for Depositing Cutting Edges on Cutting Tools	26
Special Light Alloys for Electro-Polishing	27
Steel in Shipbuilding	271
*Steel Spraying on Aluminium	216
Stresses in Locomotive Piston Rods with Unsymmetrical Crossheads	55
Stresses in Transversely Bored Shafts Subjected to Torsional Loading	51
*Stress Increase and Stress Reduction by Arrangement of Multiple Notches	444
*Stress-Studies on Piping Expansion Bellows	252
Swedish 380 kV Transmission System	419
*Temperature Measurements in Gases Flowing at High Velocity	104
Theoretical and Experimental Results on the Fitting of Rotors on Shafts of Electrical Machines	357
*Theory and Practice of the Crush Dressing Operation on Grinding Wheels	67
Thermocouple for the Measurement of Steel Bath Temperatures	344
*Thermodynamic Analysis of Centrifugal Compressors	216
*Thermodynamic Properties of Gas Mixtures Encountered in Gas Turbine and Jet Propulsion Processes	67
Thickness Detector	30
Three-to-two Phase, Artificially Cooled Dry Transformer as Power Supply for Thermo-Electric Use	386
Tools and Techniques of Management	82
Two New Instruments for Materials Testing	168
United Kingdom Engineering Exports to Canada	66
*Vaporisation Cooling of Electric Machines	333
*Vibration Control of Engines	335
Vibrations in Power Transmission Lines—New Observations and Test Results	355
Voltage Stabilization by Means of Barium Titanate Capacitors	427
*Welding Rods for Acetylene Butt-Welding of Aluminium Alloys	176
Wire Loop-Forming Tool	202
Wood-Screw Automatic	29
World's Largest Testing Machine	97

*Short Abstract published in Classified Abstract Section

age
102
205
354
91
435
340
209
252
241
26
27
271
216
55
51
444
252
419
104
357
67
344
216
67
30
386
82
168
66
333
335
355
427
176
202
29
97